Perceptual Evolution for Software Project Cost Estimation using Ant Colony System

Volume 81 - Number 14

Year of Publication: 2013

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10.5120/14185-2385

Abstract

My proposed work is inspired by the experiment that uses expert judgment for estimation of the cost on the basis of previous project results. In this paper estimator can use Analogical strategies as well as Algorithmic Strategies as they wish. The proposed method is divided into two phases. First phase computed the probability of each selected factors by ant colony system. Second phase combines the value of these factors to calculate the cost overhead for the project by using Bayesian belief network. Once this overhead is computed productivity is directly calculated which can be converted in effort and cost. Our computation gives the Cost Overhead that depends on various factors. Till date Ant Colony Optimization Algorithm has provided solutions for the problems that have multiple solution and user are interested in best solution. This algorithm provides a proper heuristic for the problem and computes the best possible solution. It gives the solutions in terms of probability, i. e. The most likely occurred solution and the best solution. It was first introduced in Travelling Salesman Problem for finding the minimum cost path. We have mapped our problem in a simple graph by using a questionnaire. That gives the minimum length path, the path that obtains minimum deviation from the nominal project for each factor and theirs encouraging results from proposed technique.
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- Barry Boehm, Chris Abts, "Software Development Cost Estimation Approaches – A Survey", University of Southern California Los Angeles, CA 90089-0781 Sunita Chulani IBM Research 650 Harry Road, San Jose, CA 95120.
Index Terms

Computer Science  Software Engineering

Keywords